Remarks/Arguments:

Claims 1-3, 6-12 and 14-35 are pending and stand rejected.

By this Amendment, claims 1-3, 6-12, 14-20, 22-25 and 27-33 are amended, new claim 36 is added and claim 35 is cancelled without prejudice. No new matter is presented by the claim amendments and new claim. Support for the claim amendments and new claim can be found throughout the original specification and, for example, in the original specification at paragraphs [0037] and [0039].

Examiner Interview

An Examiner Interview was conducted on October 6, 2008. A copy of the Summary of the Examiner Interview is enclosed herewith.

Rejection of Claim 35 Under 35 U.S.C. § 112, First Paragraph

In the Office Action, at page 3, claim 35 is rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement and written description requirement.

Claim 35 has been cancelled without prejudice. Accordingly, the rejection of claim 35 is now moot.

Rejection of Claims 1, 3, 6-7, 9-10, 12, 14-15, 18-20, 23-25 and 35 Under 35 U.S.C. §102

In the Office Action, at page 4, claims 1, 3, 6-7, 9-10, 12, 14-15, 18-20, 23-25 and 35 are rejected under 35 U.S.C. 102(e) as anticipated by Gan et al. (US Patent Publication No. 2006/176850, hereafter referred to as Gan).

Reconsideration is respectfully requested.

Claim 35

Claim 35 has been cancelled without prejudice. Accordingly, the rejection of claim 35 is now moot.

Claim 1

Claim 1 is directed to a communication method for use in a communication system utilizing a plurality of bands, and recites:

> ... mapping a bit stream in a data stream to the plurality of bands, respectively, in a first band order wherein the first band order indicates a mapping pattern for mapping the bit stream to the respective plurality of bands;
>
> mapping the bit stream to the same plurality of bands, as the plurality of bands used to map the bit steam in the first band order, in a second band order wherein the second band order indicates a mapping pattern that is different from the mapping pattern of the first band order; and
>
> transmitting the bit stream mapped to the plurality of bands respectively in the first band order and the bit stream mapped to the plurality of bands respectively in the second band order without changing the plurality of bands used to transmit the bit stream.

That is, the bit stream is mapped to a plurality of band in a first band order which indicates a corresponding mapping pattern and the bit stream is also mapped to the same plurality of bands, but in a second band order according to a mapping pattern corresponding to the second band order where the first and second mapping patterns are different. Further the bit stream is transmitted in the first and second band orders.

Gan Reference

Gan discloses an approach for managing communication channels based on performance of the communication channels. The Examiner corresponds channels in Gan to bands recited in claim 1. Although, Applicants do not agree that bands and channels are the same, Applicants will, *arguendo,* accept the point solely for the purpose of analyzing the difference between Gan and the present invention recited in claim 1. The Examiner contends that retransmission in Gan due to a failed Cyclic Redundancy Check (CRC) causes a remapping of a bit stream in a second band order. (See the Office Action at page 4, third full paragraph.) Applicants agree with the Examiners contention only when one or more channels are added or dropped before retransmission. That is, if the plurality of channels in Gan does not remain the same for the original transmission and the retransmission in Gan, then the channel (band) order in the retransmission is different from that of the original transmission. By contrast, claim 1 recites "...mapping the bit stream to the <u>same</u>

plurality of bands, as the plurality of bands used to map the bit steam in the first band order, in a second band order wherein the second band order indicates a mapping pattern that is different from the mapping pattern of the first band order," (emphasis add). Alternatively, in Gan, if channels are not added or dropped before retransmission then the first and second band order are the same band order, which is contrary to the recitation in claim 1 that the first and second band orders are different. That is, Gan is silent regarding the use of the same plurality of bands for retransmission of a bit stream using a different band order.

Accordingly, claim 1 is submitted to be allowable over Gan for at least the above-mentioned reasons.

Claims 7, 10, 15, 18, 20, 23, and 25

Claims 7, 10, 15, 18, 20, 23, and 25, while not identical to claim 1, include features similar to those found in claim 1. Accordingly, Applicants respectfully submit that claims 7, 10, 15, 18, 20, 23, and 25 are allowable over Gan for at least the same reasons as set forth for claim 1.

Claims 3, 6, 9, 12, 14, 19, and 24

Claims 3, 6, 9, 12, 14, 19, and 24, which include all of the limitations of their respective independent claims, are submitted to be allowable over Gan for at least the same reasons as their respective independent claims.

Rejection of Claims 2 and 11 Under 35 U.S.C. § 103

In the Office Action, at page 5, claims 2 and 11 are rejected under 35 U.S.C. 103(a) as unpatentable over Gan in view of Ho (US Patent Publication No. 2004/0170217).

Reconsideration is respectfully requested.

Claims 2 and 11, which include all of the limitations of claim 1 or 10, are submitted to patentably distinguish over Gan for at least the same reasons as their respective independent claims.

The addition of Ho does not overcome the deficiencies of Gan. This is because, Ho does not disclose or suggest "mapping the bit stream to the same plurality of bands, as the plurality of bands used to map the bit steam in the first band order, in a second band order wherein the second band order indicates a mapping pattern that is different from the mapping pattern of the first band order

...," as required by claim 1. Instead, Ho discloses a rotation index field 306 to specify the rotation sequence of channels to be used during a current superframe. (See Ho at paragraph [0064].) Ho, however, is silent regarding mapping of a bit stream in a first band order and mapping the same bit stream in a second band order where the mapping patterns of the first and second band orders are different.

Claims 2 and 11, which include all of the limitations of their respective independent claims, are submitted to be allowable over Gan in view of Ho for at least the same reasons as their respective independent claims.

Rejection of Claims 8, 16-17 and 26-27 Under 35 U.S.C. § 103

In the Office Action, at page 6, claims 8, 16-17 and 26-27 are rejected under 35 U.S.C. 103(a) as unpatentable over Gan in view of Son et al. (US Patent Publication No. 2003/0189892, hereafter referred to as Son).

Reconsideration is respectfully requested.

Claims 8, 16-17 and 26-27, which include all of the limitations of claim 7, 15 or 25, are submitted to patentably distinguish over Gan for at least the same reasons as their respective independent claims.

The addition of Son does not overcome the deficiencies of Gan. This is because, Son does not disclose or suggest "mapping the bit stream to the same plurality of bands, as the plurality of bands used to map the bit steam in the first band order, in a second band order wherein the second band order indicates a mapping pattern that is different from the mapping pattern of the first band order ...," as required by claim 1. Son is silent regarding first and second band orders having different mapping patterns and, thus, is silent regarding mapping of a bit stream in a first band order and the bit stream (the same bit stream) in a second band order where the mapping patterns of the first and second band orders are different.

Claims 8, 16-17 and 26-27, which include all of the limitations of their respective independent claims, are submitted to be allowable over Gan in view of Son for at least the same reasons as their respective independent claims.

Rejection of Claims 1, 18, and 28-33 Under 35 U.S.C. § 103

In the Office Action, at page 7, claims 1, 18, and 28-33 are rejected under 35 U.S.C. 103(a) as unpatentable over Boetzel et al. (US Patent No. 7,079,568, hereafter referred to as Boetzel) in view of Gan and Bauchot et al. (US Patent No. 5,442,659, hereafter referred to as Bauchot).

Reconsideration is respectfully requested.

Claim 1

Claim 1 was discussed above.

Boetzel Reference

In the Office Action, the Examiner acknowledges that "Boetzel does not expressly teach the same data stream is mapped to the first band order and second band order, and also, the first and second band orders are different." Moreover, Boetzel discloses a frequency hopping method in which a base station 11 specifies the sequence of frequencies to be used during frequency hopping. (See Boetzel at col. 4, lines 34-38.) In Boetzel, the base station 11 notifies the mobile station 12 which of the carrier frequencies should not be used due to parasitic interference. (See Boetzel at col. 4, lines 43-47.) Thus, similar to Gan, Boetzel teaches the dropping of frequencies to reorder the frequency hopping sequence but does not disclose or suggest use of the same frequencies for transmission of a bit stream using different band orders (i.e., first and second band orders).

Gan Reference

Claim 1 is submitted to be allowable over Gan for at least the previously-mentioned reasons.

Bauchot Reference

The addition of Bauchot does not overcome the deficiencies of Boetzel and Gan. This is because, Bauchot does not disclose or suggest "mapping the bit stream to the same plurality of bands, as the plurality of bands used to map the bit steam in the first band order, in a second band order wherein the second band order indicates a mapping pattern that is different from the mapping pattern of the first band order ...," as required by claim 1. Bauchot is silent regarding the mapping of a bit stream in a first band order and the bit stream (the same bit stream) in a second band order using the same plurality of bands.

Accordingly, claim 1 is submitted to be allowable over Boetzel in view of Gan in further view of Bauchot for at least the above-mentioned reasons.

Claims 18 and 23

Claims 18 and 23, while not identical to claim 1, include features similar to those found in claim 1. Accordingly, Applicants respectfully submit that claims 18 and 23 are allowable over Boetzel in view of Gan in further view of Bauchot for at least the same reasons as set forth for claim 1.

Claims 28-33

Claims 28-33, which include all of the limitations of claim 1, 18 or 23, are submitted to be allowable over Boetzel in view of Gan in further view of Bauchot for at least the same reasons as their respective independent claims.

New Claim 36

New claim 36, which includes all of the limitations of claim 1, is submitted to be allowable for at least the same reasons as set forth for claim 1.

New claim 36 also includes an allowable feature beyond those of claim 1, namely: "simultaneously transmitting the bit stream in the first band order and the bit stream in the second band order for receipt by the receiver," (emphasis added).

Consideration and allowance of claim 36 is respectfully requested.

Conclusion

In view of the claim amendments, new claim and remarks set forth above, Applicants respectfully submit that the application is in condition for allowance. Notification to that effect is respectfully requested.

Respectfully submitted,

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